

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An image forming apparatus for forming an image on an image forming medium and capable of forming a specific hidden pattern for specifying an apparatus at a specific position on said medium, said image forming apparatus comprising: hardware control signal supplying means for generating and supplying a hardware control signal which is necessarily generated for an image and representing which represents that data exists when color image data exists in the image forming apparatus, said hardware control signal including an external signal which is used for usual printing and an internal signal which is generated to be used in said printer engine when a part of a test pattern is outputted;

software control signal supplying means for generating and supplying a software control signal for determining whether said specific hidden pattern is added to a color image; and

specific hidden pattern control synthesizing means for adding said specific hidden pattern on an output image when either said external signal of said hardware control signal or said software control signal is detected, and for not adding said specific hidden pattern on the output image when ~~neither~~ said internal signal of said hardware control signal ~~nor said software control signal~~ is detected.

2. (Previously Presented) The image forming apparatus according to claim 1, further comprising:

image data supplying means for supplying color image data;

data existence/absence confirming means for confirming the existence/absence of image data in said image forming apparatus;

wherein said hardware control signal supplying means generates and supplies said hardware control signal based on the existence/absence of image data confirmed by said confirming means;

wherein said software control signal supplying means generates and supplies said software control signal for adding said specific hidden pattern;

wherein said control signal synthesizing means synthesizes said control signal in such a manner that said specific hidden pattern is necessarily formed on a color image when a usual image is formed on said image forming medium based on said hardware control signal and said software control signal;

hidden pattern generating means for generating said specific hidden pattern;

test pattern generating means for generating and outputting a test pattern when a color image is not formed;

pattern selecting means for selecting and outputting one of said specific hidden pattern and said test pattern based on said control signal synthesized by said control signal synthesizing means; and

image formation output signal synthesizing means which synthesizes said color image data supplied from said image data supplying means and said specific hidden pattern selected by said pattern selecting means when said image data is inputted and which outputs said test pattern selected by said pattern selecting means when said color image data is not inputted.

3. (Original) The image forming apparatus according to claim 2, wherein said hardware control signal generated by said hardware control signal supplying means is a signal which affects the addition of said specific hidden pattern and which avoids the normal formation of a usual image when said signal is abnormal.

4. (Previously Presented) The image forming apparatus according to claim 3, wherein said hardware control signal is generated by software when said signal is set.

5. (Previously Presented) The image forming apparatus according to claim 2, wherein said specific hidden pattern generated by said hidden pattern generating means is a special pattern formed by using colors or patterns which are hard to be identified by the naked eye in such a manner that a body of an image forming apparatus which has formed an image is specified from a reproduced image on said medium, even if a specific original which must not be inherently formed is formed on said medium.

6. (Original) The image forming apparatus according to claim 2, wherein said data existence/absence confirming means generates said hardware control signal for said hardware control signal supplying means, when image data is supplied from said image data supplying means.

7. (Previously Presented) The image forming apparatus according to claim 2, wherein said control signal synthesizing means comprises an OR circuit for calculating the logical OR of said hardware control signal supplied from said hardware control signal supplying means and said software control signal supplied from said software control signal supplying means, and outputs a control signal by which a specific hidden pattern is necessarily added to an image when one of said hardware control signal and said software control signal is supplied.

8. (Previously Presented) The image forming apparatus according to claim 2, wherein said pattern selecting means comprises a selector for selecting said specific hidden pattern generated by said hidden pattern generating means with said control signal for adding said specific hidden pattern to an output image as a selected input by said control signal synthesizing means.

9. (Original) The image forming apparatus according to claim 2, said image formation output signal synthesizing means outputs to a printer engine an image formation signal by which a hidden pattern using a predetermined color or pattern is added at a predetermined position of an image to be formed by adding said specific hidden pattern supplied from said pattern selecting means to said image data supplied from said image data supplying means.

10. (Previously Presented) The image forming apparatus according to claim 2, wherein said image data supplying means comprises a yellow data supplying apparatus for supplying yellow image data to each of said image formation output signal synthesizing means and said hardware control signal supplying means.

11. (Previously Presented) The image formation apparatus according to claim 2, wherein said hardware control signal supplying means comprises a -YVDEN output portion which outputs an external yellow sub scanning direction image enabled signal (-YVDEN) based on said yellow image data.

12. (Previously Presented) The image forming apparatus according to claim 11, wherein said control signal synthesizing means comprises a NOT circuit which inverts said external yellow sub scanning direction image enabled signal (-YVDEN) outputted from said YVDEN output portion as said hardware control signal supplying means and an OR circuit for calculating the logical OR of an output from said NOT circuit and an output signal from a specific pattern addition signal generating register as said hardware control signal supplying means.

13. (Previously Presented) The image forming apparatus according to claim 11, wherein said data existence/absence confirming means generates a hardware control signal in said hardware control signal supplying means based on a control signal for controlling drive of a paper carrying motor for carrying paper as said image forming medium.

14. (Previously Presented) The image forming apparatus according to claim 11, wherein said pattern selecting means comprises a selector for selecting said specific hidden pattern generated by said hidden pattern generating means with said control signal by which said specific hidden pattern is added to an output image by said control signal synthesizing means as a selected input.

15. (Previously Presented) The image forming apparatus according to claim 14, wherein said hidden pattern generating means comprises a specific pattern generating portion for generating a specific hidden pattern.

16. (Previously Presented) The image forming apparatus according to claim 11, wherein said image formation output signal synthesizing means comprises an adder which outputs to a printer engine an image formation signal by which a hidden pattern using a predetermined color or pattern is added at a predetermined position of an image to be formed by adding said image data supplied from said image data supplying means and said specific hidden pattern supplied from said pattern selecting means.

17. (Currently Amended) An image forming apparatus for forming an image on an image forming medium and capable of forming a specific hidden pattern for specifying an apparatus at a specific position on said medium, said image forming apparatus comprising:

a hardware control signal supplying unit that generates and supplies a hardware control signal which is necessarily generated for forming an image and representing which represents that data exists when color image data exists in the image forming apparatus, said hardware control signal including an external signal which is used for usual printing and an internal signal which is generated to be used in said printer engine when a part of a test pattern is outputted;

a software control signal supplying unit that generates and supplies a software control signal for determining whether said specific hidden pattern is added to a color image; and

specific hidden pattern control synthesizing ~~circuit~~ unit that adds said specific hidden pattern on an output image when either said external signal of said hardware control signal or said software control signal is detected, and that does not add said specific hidden pattern on the output image when ~~neither~~ said internal signal of said hardware control signal ~~nor said software control signal~~ is detected.